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ABSTRACT

This study focuses on predictors of student sensitivity to college tuition and financial aid in their college choice process. Data were drawn from a longitudinal study on the postsecondary education choices of high school students in the state of Indiana. The variables student and family background, student academic characteristics, student perceptions of family financial support, student connections with institutions, and student awareness of financial aid programs were measured against student price sensitivity. Multiple regression analysis of the data suggests that students are rational actors in their decisions and that price sensitivity is complex. As family income, or the perception of parental willingness to pay, increases student sensitivity to tuition costs and financial aid decreases. Women, however, appear to be more sensitive to tuition costs than men, suggesting that females perceive gender bias in family willingness to pay. The results also indicate that information about specific institutions, about postsecondary education in general, and about financial aid influence tuition and financial aid sensitivity; however, institutional information appears to be negatively associated with tuition sensitivity. Five tables summarize the data. An appendix notes measurement of dependent and independent variables. (Contains 31 references.) (CH)

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ED 426 665

Predicting Student Sensitivity to Tuition and Financial Aid

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Abstract

This study focuses on the predictors of student sensitivity to college tuition and financial aid in their college choice process. The data analyzed in this study were drawn from a longitudinal study on the postsecondary educational choices of high school students in the state of Indiana. The variables concerning student and family background, student academic characteristics, student perceptions of family financial support, and student connections with institutions and awareness of financial aid programs were selected to predict student price sensitivity. Sequential multiple regression method was utilized in data analysis. The results indicate that in addition to student and family background and student academic characteristics, the variables concerning student perceptions, student connections with institutions and awareness of aid programs were also significant in predicting student price sensitivity. Different variables were associated with student sensitivity to tuition and financial aid. This study suggests that family and ascribed characteristics alone do not explain student price sensitivity. In addition, connections with colleges and perceptions on parental support and financial certainty can help ameliorate the negative effects of family status on student access and choice.

Predicting Student Sensitivity to Tuition and Financial Aid

Introduction

A substantial body of research conducted over the last two decades examines student responsiveness to tuition increases and financial aid offer in postsecondary educational decision (see, for example, Heller, 1997; Leslie and Brinkman, 1988). Another major research interest in higher education literature is student choice behavior to postsecondary educational institutions (see, for example, Hossler, Braxton, and Coopersmith, 1989; Paulsen, 1990). As the costs of postsecondary education have risen, policy analysts and scholars have paid increasing attention to the impact of tuition costs and student financial aid on access to postsecondary education, college matriculation decisions, and upon subsequent student persistence in postsecondary education (Hossler and Vesper, 1993; McPherson, Shapiro and Winston, 1993; Miller, 1996; Mumper, 1996; St. John, 1990a, 1990b; St. John, Starkey, Paulsen and Mbaduagha, 1995; Weiler, 1996). Institutional policy makers are concerned about student recruitment and enrollment on the one hand and institutional financial health on the other, while state and federal policy makers are worried about the effective utilization of public funds to meet national interests such as access, choice, and attainment in postsecondary education.

Recently, policy analysts and higher education researchers have become concerned about where the students go as well as whether the students go to schools since the college destinations of students are closely related to student educational attainment and career development (Hearn, 1988, 1991; McPherson and Schapiro, 1991). Thus, from a social equity perspective, college tuition and financial aid have become serious policy issues. Undoubtedly, the influence of college tuition and financial aid becomes effective since the early phase of student college choice process. However, not until the last few years has research on the impact of financial impact of college tuition and financial aid been linked with models of student college choice. Savoca (1990) integrated price impact into her research on student

application behaviors to college and concluded that this integration would result in estimating student price responsiveness more accurately. Meanwhile, an emergent trend in higher education research is the advocate that tuition pricing and financial aid offer exert different impacts on student postsecondary participation decision (St. John and Starkey, 1995). The purpose of this study is to identify the predictors of student sensitivity to college tuition and financial aid, and to differentiate the impacts of these predictors on student price sensitivity in student college choice process.

Theoretical Perspectives

This study is concerned with both student college choice and student price responsiveness, therefore, the research in both domains form the conceptual framework for this study. According to Hossler and Gallagher (1987) three-stage model of student college choice, the present study focuses on student price sensitivity to tuition and financial aid in the choice phase of their college choice process.

Three lines of research are prevalent in student college choice literature: sociological research on status attainment, econometric studies on investment decision making, and more recently developed combined models of college choice. From a sociological perspective, the role of background characteristics such as gender, ethnicity, parental income, parental education, and student grade-point-average are commonly used in studies of status attainment (Coleman, Hoffer and Kilgor, 1982; Hanson, 1994; Karen, 1991; Sewell, Haller, and Ohlendorf, 1970). Researchers also demonstrate that the background factors such as gender, parental education, parental income and student ethnicity can exert strong direct as well as indirect influence on student academic achievement and educational plans, furthermore, influence student educational routes (Hearn, 1988, 1991; Hossler and Stage, 1992).

In addition, this study draws upon constructs from the economics of education. Economists base their models of postsecondary participation and college choice upon human capital theory. Individuals are assumed to make postsecondary educational decisions based on

variables such as the expected costs, the expected benefits, and the utility of educational options. Therefore, financial attributes of educational institutions (e.g., tuition, financial aid, housing, and cost of commuting) are frequently included. Several studies of postsecondary participation and college choice have been conducted employing some or all of these variables to study outcomes of student college choice (Bishop, 1977; Kohn, Manksi, and Mundel, 1976; Manski and Wise, 1983; McPherson and Shapiro, 1991; Parker and Summers, 1993). Recently, some economists have argued that progress in research on college choice is possible only if subjective data are integrated into empirical analysis (Manski, 1993). Catsiapis (1987), for example, included student expectations of parental contribution into student college choice modeling and demonstrated that this factor was significant in student educational investment decision.

This study also benefits from the emergent approach on student price responsiveness. Traditionally, researchers in student price responsiveness assume that students respond to a single net price. However, during the last decade, researchers assert that students respond to a set of prices and subsidies differently in their postsecondary decision making, furthermore, the responsiveness of students from different family backgrounds is highly related to the types of subsidies (St. John and Starkey, 1995).

Finally, this study is also informed by the combined models of student college choice. Combined models have the advantage of focusing in greater detail specifically on postsecondary educational decision-making. These models use constructs from both status attainment models from sociology and constructs from the economics of education (Hossler, Braxton and Coopersmith, 1989; Paulsen, 1990). This study uses variables typically associated with the search and choice phases of student college choice (Hamrick and Hossler, 1996; Schmit, 1991). According to Hossler and Gallagher (1987), the search stage of college choice entails looking for possible colleges to consider attending while simultaneously learning more about the relevant characteristics of college (e.g., size, cost, social atmosphere, special academic programs, campus facilities, etc.). The choice stage involves determining

which colleges to apply to and the evaluation process which leads to a decision to attend a specific vocational school, college, or university. Information gathering typically begins during the search stage of college choice and continues during the choice stage. Students do not usually become concerned about college costs and financial aid until the choice stage.

The present study is intended to focus on student sensitivity to tuition and financial aid. In addition to the commonly used variables such as student family background characteristics and student ascribed characteristics, we include student academic characteristics, student perceptions, measures of student institutional awareness, and familiarity with financial aid programs in the present model. Specifically, the research questions of interest are as follows: 1) What variables are associated with student price sensitivity? 2) Are there any differences of the associated variables with college tuition and financial aid? 3) To what extent do student family characteristics and student ascribed characteristics influence student price sensitivity? 4) To what extent do student perceptions and student institutional connections influence student price sensitivity?

Research Design

The sample for this study was drawn from all students attending twenty-one high schools within the state of Indiana. A cluster design was used to select schools to assure that the sample represented adequate numbers of ethnic minorities, students at all levels of socioeconomic status, and rural as well as metropolitan high schools (Borg and Gall, 1989). The total sample of students and parents was surveyed ten times between their freshman (1986-1987) and senior years (1989-1990) in high school. Because of non-responding students and parents, and because of missing answers to the questions of research interest, a sample of 296 students comprises the sample analyzed.

In this study, we use separate indicators to measure student price sensitivity to tuition and financial aid. The three dependent variables, accordingly, are: the importance of low tuition, the importance of financial aid, and the influence of financial aid offer in changing

students' decision about institution to attend. These questions were asked of student respondents during the time they were enrolled in twelfth grade in high school. The independent variables to be included draw upon concepts embedded in economic, sociological, and combined models of student college choice. The independent variables cover the constructs concerning student family background characteristics, student academic characteristics, student perceptions on family financial support, and student connections with intended postsecondary institutions and awareness of financial aid programs. In total, all variables for this study were drawn from questions asked on the ninth and twelfth grade surveys. The variables such as student gender and student family background were taken from the student and parent questionnaires surveyed when students were at ninth grade. All other variables were drawn from the student survey conducted when students were in twelfth grade schools. The measurements of all the variables included in this study are described in Appendix A.

We used sequential multiple regression techniques to identify predictors of student price sensitivity to tuition and student financial aid. The variables concerning student ascribed and family background, student academic achievement and expectation, student awareness about institution and financial aid programs, and student expectation and confidence about family financial support were included in regression analysis sequentially. The analytical strategy employed in this study is very similar to those used by some other researchers (Hearn, 1988). It enabled us to examine the role of different blocks of independent variables in determining student price sensitivity.

Results

Table 1 contains the minimum, maximum, means, and standard deviations of the variables in this analysis. Table 2 presents the correlation for all independent and dependent variables. The simple correlation in Table 1 reveals a few interesting points. First, the independent variables are not highly correlated so that in some sense multi-collinearity is less

of a concern in this regression analysis. Second, three dependent variables appear to be correlated with different independent variables, suggesting different variables may relate to student sensitivity to tuition costs and financial aid. Specifically, the predictors for student sensitivity to financial aid are not the same as those related to the influence of financial aid offer on student final institutional choice for attendance.

(Insert Table 1 and 2 about here)

Table 3 presents the results from the first sequential regression, in which student reported importance of low tuition was the dependent variable. The results indicate that student background variables provide a modest explanation of the variance of student sensitivity to the importance of low tuition in college choice. Student gender, father's education, and parent income are statistically significant. Male students are more likely to have a significantly lower reported importance of low tuition than female students are. Father's educational level is negatively related to student concern about tuition costs. As father's educational level increased, student reported importance of low tuition decreased. When parent income increased, student reported importance of low college tuition decreased significantly. The inclusion of student high school GPA and educational expectation improved the model significantly. In fact, this block of variables led to the largest improvement in this sequential analysis. High school GPA and educational expectation significantly reduced student concern about tuition costs. Those students who had high GPA and higher educational expectation reported lower level of importance of low tuition in their college choice. In the third step, information-related variables were included. Although the predicting power of the model increased modestly, only information about institutions is statistically significant. That is, students who had more information about institutions were less concern about the importance of low tuition. Finally, we included student expectation on parental financial contribution and student certainty about family ability to pay. The results indicate that students who expected

higher level of parental contribution were less worried about college tuition, and those who were more certain about family ability to pay were less concerned about college tuition. It is worthwhile to note that when the variables such as student academic characteristics, information-related variables, and student perceptions of family financial support were included, student background variables such as family income became statistically insignificant. This suggests the effects of family income on student tuition sensitivity, in some way, were mediated by student academic characteristics, information awareness, and student perceptions of family ability of financial support.

(Insert Table 3 about here)

In the regression of the independent variables upon student reported importance of aid, the results reveal a bit different pattern (Table 4). The results from the first step regression indicate the effects of student gender, father's education, and family income on student reported importance of financial aid in their college choice. Male students are less sensitive to financial aid than their female counterparts. Father's education level reduced the reported importance of financial aid in student college choice. Parental income can significantly reduce the importance of financial aid in student college choice decision. Interestingly, student high school GPA and educational expectation turn out not to be significant in predicting student sensitivity to financial aid, as the results in the second step showed. In fact, there was no significant improvement of the model in predicting student sensitivity to financial aid when high school GPA and educational expectation were included. The results from the third step show that student information about financial aid programs was negatively related to the reported importance of financial aid. That is, students who had more information about financial aid programs tend to think financial aid less important in their college choice. This finding is an indirect evidence that students and their family were not taking advantage of the current financial aid systems as demonstrated by some economists (Edlin, 1993). In addition,

students who were more actively in requesting information from postsecondary institutions appear to think financial aid more important in their college choice. Finally, student expectation of parental contribution to educational expenses and students' certainty that they will be able to pay for college are negatively associated with student sensitivity to financial aid. When students expect larger contribution to their educational expenses from parents, they tend to treat financial aid less important. As student confidence on their families' ability to pay increases, the importance of financial aid decreases. The inclusion of student expectation and certainty about family ability to pay improved the fit of the model significantly. The gender difference in the sensitivity to financial aid disappeared in the final step, suggesting the gender difference is largely an effect of student expectation on parental financial contribution and student certainty of family ability to pay.

(Insert Table 4 about here)

Table 5 provides the results from the sequential regression when the influence of financial aid in changing a student's college choice decision was the dependent variable. In addition to the effects of student gender, father's education, and family income, the status of student of color seems to be positively related to the effects of financial aid on changing student final choice. That is, students of color appear to be more likely to change their final choice of institution for attendance upon the effect of financial aid offers. Student academic characteristics, as the results from the second step shows, are not significantly related to the effect of financial aid offers. The results from third step indicate that students with more institutional information were less likely influenced by financial aid offers in their final decision. It also shows that the frequency with which students requested information from the institution is one of the significant indicators that students may change their institutional choice upon financial aid offers. The more actively engaged a student is in requesting information about colleges, the stronger the influence of financial aid offers tend to be.

Finally, student expectation of parental contribution to college costs and student certainty about family ability to pay are negatively associated the influence of financial aid. As we anticipated, the higher the expectation is, or the higher level of certainty is, the less likely students were to indicate that a large financial aid offer would change the decision about which institution to attend.

(Insert Table 5 about here)

Discussion

From the results in the sequential regressions in this study, we can see that the inclusion of the variables concerning student perceptions and student connections related with intended institution can increase the predictive strength of the model significantly. Moreover, the perception variables turn out to be among the most significant predictors in student sensitivity. These findings support Manski's observation that economists should combine choice data with interpretable subjective data on expectations and preferences in empirical analysis in order to understand student college choice process deeply (1993).

The three perspectives (sociological, econometric, and combined models) can clearly help to explain our findings on student price sensitivity in college choice. Family background and student ascribed characteristics exert significant influence on students' reported importance of low tuition and financial aid in their college choice process. Students from families with higher parental income, as conventionally believed, appear to have less barriers to enter higher cost institutions and to rely less on financial aid in college choice. Student gender plays a role in responding to the importance of low college. Female students tend to be more likely to think low tuition is important than their male counterparts. However, in the final step regression, parental income is no longer significant in predicting student sensitivity to college tuition while it is still significant in the case of financial aid. It is possible that parental income may exert an indirect impact on student price sensitivity mediated through

student perceptions of parental ability to pay and their own certainty of their ability to pay to higher tuition institutions.

The results also lend support to the econometric perspective. Student expectations of parent financial contribution and student certainty about their family ability to pay are significant in all three cases. This result suggests that students are very rational in their college investment decision. As long as their parents can make larger contributions to the expenses of their college education, students tend to prefer to higher cost institutions and tend to think financial aid is less important in their college decisions. They are also more likely to be unaffected by financial aid offers in their choice of the institutions to attend. Students perceived family ability to pay can also significantly reduce the importance of low tuition and financial aid in their college choice. Therefore, they are more likely to apply for admissions to higher net cost institutions. The results, however, raise an interesting question since parental income is not correlated with tuition in the more complex model presented in Table 3. It is possible that students' perceptions of their parents' ability to pay, or of their own ability to pay are indirect measures of family income. However, these relationships could also be indicators of parental willingness to sacrifice for college (regardless of family income) and of the extent to which students have saved and planned for the financing of their own education. The results suggest that parental willingness to contribute, regardless of family income, has some effect on tuition and financial aid sensitivity.

In addition, the combined model offered insights in student college choice process. The amount of information students possess about intended institution can reduce student sensitivity to tuition to a significant extent. Student information requesting behavior about intended institution is a positive predictor of the influence of financial aid offers on students' decisions about which institutions to attend. In this case, requesting information may signal a level of student price sensitivity that operates independent of family income as students become more interested in specific institutions.

These results also point toward the separation of different indicators of student price sensitivity. In this study, student price sensitivity to tuition and financial aid tends to be associated with different predictors. As St. John and others (1995) have suggested, college tuition and financial aid are not perfect substitutes in student search and choice phases of college choice. Therefore, they can exert different impact on student application and enrollment behaviors to postsecondary institutions. In our analysis, for example, student academic characteristics tend to be significantly associated with tuition sensitivity but not with financial aid sensitivity.

We also find that financial aid offers do exert different impacts in changing students' decision about the institutions to attend with respect to student race or ethnicity. Financial aid offers are viable vehicle in attracting students of color to attend specific institutions. The fact that the information about the intended institution tends to significantly reduce the possibility that students were affected by financial aid offers is very interesting. The possible explanation of this phenomenon is that for those students at twelfth grade, they have come through very tough process to identify the "right" institutions as enrollment candidates and do not want to make change in the very final moment.

Implications

The results from this study provide several interesting insights into the college decision making process and the impact of tuition costs and financial aid upon student college choice. The results suggest that students are rational actors in their decisions. As family income, or perceptions of parental willingness to pay for their college education increases, their sensitivity to tuition costs and to financial aid decreases. Finally, the discovery that women appear to be more sensitive to tuition costs than men is troubling. In addition, the gender difference in the sensitivity to financial aid diminished when student perception of family financial support was controlled. It suggests that female students continue to perceive gender bias in their families' willingness to pay for their formal education after high school.

The results also indicate that information about specific institutions, about postseondary education in general, and about financial aid can influence tuition and aid sensitivity. The relationships, however, are complex and difficult to interpret. Information about the institutions that students are considering attending is negatively associated with tuition sensitivity. The most plausible explanation is that students are more likely to thoroughly investigate institutions that they are most serious about. Once they have come this far in the college choice process, tuition is not as important as other institutional characteristics. On the other hand, requesting information about colleges (colleges in general) is strongly positively associated with students' anticipated influence of financial aid offers upon enrollment decisions. At this time, we have no hypothesis about the directionality of this relationship. This merits further investigation.

Overall, these findings suggest price sensitivity is complex. The results suggest that public policy makers may be able to influence student access and choice by providing more information about colleges and universities. Information about financial aid programs may also be helpful. Parental education and family income alone do not explain price sensitivity. The subjective factors such as perception, expectation, and preference of students can play dominant roles in shaping student college choice and enrollment decisions. The formation of these subjective factors of students, therefore, merits further investigation. The results also reinforce what many financial aid administrators already know, that ability to pay for college and willingness to pay are not perfectly correlated with each other.

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Table 1. Descriptive statistics of all the variables

	Min	Max	Mean	SD
Independent variables				
Background variables				
1. Sex (male=1)	0.00	1.00	0.49	0.50
2. Race/Ethnicity (Student of color=1)	0.00	1.00	0.06	0.23
3. Father's Education	1.00	7.00	5.11	1.21
4. Mother's Education	1.00	7.00	4.90	1.16
5. Parental Income	1.00	10.00	6.72	2.40
Academic Characteristics				
6. High School GPA	1.00	3.00	2.20	0.65
7. Educational Expectation	1.00	5.00	3.53	1.03
Connection and awareness				
8. Aid Information	1.00	4.00	2.95	0.87
9. Institution Information	1.00	4.00	3.49	0.65
10. Requesting about Information	1.00	4.00	2.51	0.94
Perception on Family Support				
11. Expectation on Parental Contribution	1.00	5.00	3.41	1.27
12. Certainty about Family Ability to Pay	1.00	4.00	2.70	0.98
Dependent variables				
13. Importance of Low Tuition	1.00	5.00	3.39	1.29
14. Importance of Aid	1.00	5.00	4.18	1.21
15. Influence of Aid Offer	1.00	4.00	2.43	0.98

Note: a. Measurements of variables are in Appendix A;
b. Sample size N=296.

Table 2. Correlation of independent and dependent variables

	1	2	3	4	5	6	7	8
1. Male	1.000							
2. Student of Color	-.011	1.000						
3. Father's Educ.	.032	-.024	1.000					
4. Mother's Educ.	-.039	-.115*	.560**	1.000				
5. Parental Income	-.046	-.069	.425**	.311**	1.000			
6. High School GPA	-.059	-.053	.157**	.131*	.116*	1.000		
7. Educ. Expectation	.000	-.056	.299**	.258**	.234**	.399**	1.000	
8. Aid Info.	-.001	-.051	-.036	.038	.110	.133*	.009	1.000
9. Institutional Info.	-.031	-.162**	.107	.143*	.164**	.272**	.260**	.385**
10. Requesting	-.105	.067	.006	.059	.048	.120*	.097	.075
11. Certainty	.127*	-.014	.198**	.177**	.259**	.066	.120*	.282**
12. Expectation	.002	-.124*	.305**	.239**	.431**	.069	.160**	.078
13. Low Tuition	-.183**	.038	-.216**	-.127*	-.240**	-.227**	-.296**	-.141*
14. Financial Aid	-.098	.024	-.248**	-.154**	-.316**	-.100	-.080	-.144*
15. Aid Influence	-.111	.174**	-.131*	-.032	-.145*	-.084	-.022	-.092

	9	10	11	12	13	14	15
9. Institutional Info.	1.000						
10. Requesting	.308**	1.000					
11. Certainty	.121*	-.125*	1.000				
12. Expectation	.041	.001	.324**	1.000			
13. Low Tuition	-.258**	-.117*	-.279**	-.235**	1.000		
14. Financial Aid	-.112	.070	-.419**	-.394**	.472**	1.000	
15. Aid Influence	-.128*	.139*	-.329**	-.300**	.268**	.374**	1.000

Note: a. *, ** indicate correlation significant at the 0.05 and 0.01 level (2-tailed) respectively;
b. Sample size N=296.

Table 3. Standardized coefficients when dependent variable is Importance of Low Tuition

	Step 1	Step 2	Step 3	Step 4
1. Male	-.187***	-.194***	-.200***	-.179***
2. Student of Color	.020	.009	-.005	-.008
3. Father's Education	-.128*	-.078	-.098	-.073
4. Mother's Education	.000	.028	.043	.061
5. Parental Income	-.193***	-.165***	-.141**	-.075
6. High School GPA		-.136**	-.097	-.099*
7. Educational Expectation		-.186***	-.167***	-.154**
8. Aid Information			-.064	-.012
9. Institution Information			-.124*	-.131**
10. Requesting about Information			-.062	-.088
11. Expectation on Parental Contribution				-.167***
12. Certainty about Family Ability to Pay				-.104*
R square	.109	.175	.206	.243
R square change	.109***	.066***	.012**	.037***

Note: a. *, **, and *** indicate 0.1, 0.05, and 0.01 significance level respectively;
b. Sample size N=296.

Table 4. Standardized coefficients when dependent variable is Importance of Aid

	Step 1	Step 2	Step 3	Step 4
1. Male	-.106*	-.111*	-.100*	-.064
2. Student of Color	-.001	.000	-.018	-.031
3. Father's Education	-.131*	-.132*	-.142**	-.092
4. Mother's Education	-.003	-.005	-.003	.030
5. Parental Income	-.264***	-.267***	-.250***	-.116*
6. High School GPA		-.076	-.060	-.064
7. Educational Expectation		.054	.048	.074
8. Aid Information			-.104*	-.012
9. Institution Information			-.048	-.066
10. Requesting about Information			.099*	.057
11. Expectation on Parental Contribution				-.276***
12. Certainty about Family Ability to Pay				-.241***
R Square	.127	.132	.153	.285
R square change	.127***	.005	.021*	.131***

Note: a. *, **, and *** indicate 0.1, 0.05, and 0.01 significance level respectively;
b. Sample size N=296.

Table 5. Standardized coefficients when dependent variable is Influence of Aid Offer

	Step 1	Step 2	Step 3	Step 4
1. Male	-.107*	-.112**	-.098*	-.067
2. Student of Color	.173***	.171***	.140**	.127**
3. Father's Education	-.125*	-.128*	-.126*	-.081
4. Mother's Education	.089	.085	.084	.113*
5. Parental Income	-.112*	-.116*	-.104	.018
6. High School GPA		-.086	-.071	-.075
7. Educational Expectation		.066	.072	.095
8. Aid Information			-.036	.046
9. Institution Information			-.126*	-.143**
10. Requesting about Information			.164***	.127**
11. Expectation on Parental Contribution				-.241***
12. Certainty about Family Ability to Pay				-.224***
R Square	.072	.079	.111	.217
R square change	.072***	.007	.032**	.106***

Note: a. *, **, and *** indicate 0.1, 0.05, and 0.01 significance level respectively;
b. Sample size N=296.

Appendix A Measurement of dependent and independent variables

1. Measurement of dependent variables

1) Importance of attending a low tuition institution / Importance of the financial aid:
(1) not important
(2) somewhat important
(3) undecided
(4) important
(5) very important

2) Extent to which financial aid offer can change student decision about the institution to attend:
(1) To no extent
(2) To a small extent
(3) To some extent
(4) To a great extent

2. Measurement of Independent Variables

1) Student family background variables

a. Father's and mother's Education:
(1) < 8th grade
(2) 8th grade
(3) some high school
(4) high school
(5) some college
(6) college
(7) post-college

b. Parent income:
(1) <10,000
(2) 10,000-14,999
(3) 15,000-19,999
(4) 20,000-24,999
(5) 25,000-29,999
(6) 30,000-34,999
(7) 35,000-39,999
(8) 40,000-44,999
(9) 45,000-49,999
(10) >49,999

2) Student ascribed characteristics

a. Gender: (0) male; (1) female

3) Student academic characteristics

a. Grade point average in high school:
(1) C- to C+
(2) B- to B+
(3) A- to A+

b. Student education expectation:
(1) vocational-technical
(2) two-year college
(3) four-year college
(4) master's degree
(5) professional degree

4) Student perceptions on family financial support

a. Certainty of the ability to pay:
(1) uncertain
(2) somewhat certain
(3) certain
(4) very certain

b. Student expectation on parent contribution to educational expenses:
(1) none
(2) 1/4
(3) 1/2
(4) 3/4
(5) all

5) Student connections with intended postsecondary institutions

a. Information about institution / information about financial aid programs:
(1) Not informed
(2) Somewhat informed
(3) Informed
(4) Very informed

b. Information requesting:
(1) not very often
(2) somewhat often
(3) often
(4) very often